

REMARKS

INTRODUCTION

In accordance with the foregoing, claim 19 has been cancelled without prejudice or disclaimer, claims 1, 8, 15 and 18 have been amended, and claim 20 has been added. No new matter is being presented, and approval and entry are respectfully requested. Therefore, claims 1-18, 20 and 21 are pending and reconsideration is respectfully requested.

OBJECTIONS TO THE CLAIMS

In the Office Action, claims 1, 8, 18 were objected to. However, these claims have been amended to correct the objectionable issues and, therefore, withdrawal of the objection is respectfully requested.

DOUBLE PATENTING

Claim 19 was objected to as being a substantial duplicate of claim 17. Accordingly, claim 19 has been cancelled. Thus, it is respectfully requested that the objection be withdrawn.

REJECTION UNDER 35 U.S.C. §102

In the Office Action, claims 15 and 16 were rejected under 35 U.S.C. §102 as anticipated by Kobayashi (US Patent No. 5,307,127). However, in view of the fact that claim 15 has been amended and now recites a second bias to prevent toner from passing through the gap between the developer units and the photoreceptor medium and since the Office Action itself acknowledges that Kobayashi does not disclose a second bias, applicants respectfully assert that the rejections of claims 15 and 16 are moot.

REJECTION UNDER 35 U.S.C. §103

In the Office Action, claims 1-3, 8-10, and 17-19 were rejected under 35 U.S.C. §103(a) as unpatentable over Kobayashi (US Patent No. 5,307,127) in view of Funatani (Japan '758). These rejections are traversed.

Regarding the rejection of claim 1, claim 1 recites a color image forming apparatus

comprising a photoreceptor medium, an exposing unit that scans light onto a photoreceptor drum to form a latent electrostatic image, a plurality of developer units, and a power supply. The plurality of developer units include developer rollers supplying toner to the latent electrostatic image to develop the latent electrostatic image into a toner image, each developer unit including toner of a different color, and the developer units being arranged around the photoreceptor medium so that the developer rollers are separated by a development gap from the photoreceptor medium. The power supply selectively applies a first bias allowing toner to be supplied through the development gap to the photoreceptor medium on which the latent electrostatic image is formed and a second bias preventing toner from passing through the development gap.

Meanwhile, in Kobayashi, a developing bias is applied to a developer carrying member, wherein the developing bias application device applies an oscillating bias voltage, including a first peak voltage, for an application period T1, for forming an electric field for urging the developer from the developer carrying member to the image bearing member, and a second peak voltage, for an application period T2, for forming an electric field for urging the developer from the image bearing member to the developer carrying member. Here, T1:T2 satisfies the ratio 1:2-1:10. Despite the use of the second peak voltage for the period, T2, the Office Action correctly understood that Kobayashi does not provide a second bias to prevent toner from passing through the development gap. However, the Office Action improperly suggests that the claimed second bias could be provided to Kobayashi via a combination between Kobayashi and Funatani.

Funatani is directed to an image forming device in which a DC bias of a DC bias voltage is applied onto a developing sleeve during a non-developing operation so that the “soaring up” of toner during the non-developing operation can be prevented. Although the teaching of the use of the DC bias voltage in Funatani is similar to the use of the claimed second bias, applicants respectfully assert that it would not have been obvious to combine the teachings of Funatani with that of Kobayashi to generate the claimed invention.

In support of this position, applicants first note that Kobayashi discloses that toner that is “not contributable to the development” of the image is moderately attracted to the sleeve (which corresponds to the claimed developer roller) for a period T2, which is long. In other words, the Kobayashi bias to cause the toner to be attracted to the sleeve is kept low to prevent image density from being reduced while the time period in which this is the case is lengthened. Thus, it can be said that Kobayashi itself discloses an effective biasing voltage such as that of the

reference to Funatani. Furthermore, that being the case, a combination of Kobayashi and Funatani is redundant.

Applicants also note that Funatani is directed to an image forming device which employs the rotary method of conventional image forming apparatuses that is described in the specification. As discussed in the specification, in image forming apparatuses using the rotary method, an additional driving motor is required to operate the turret to provide the rotation. Further, if the driving motor is used to drive the turret, a complicated switching method is provided. Given, these drawbacks, neither the claimed invention nor the patent to Kobayashi, employ the rotary method. Therefore, applicants assert that Funatani and Kobayashi are directed to such different technologies that particular teachings in Funatani would be inapplicable to Kobayashi.

Therefore, applicants respectfully assert that claim 1 is patentably distinguished from the combination of Kobayashi and Funatani and that, thus, the rejection of claim is believed to be moot.

Regarding the rejections of claims 8 and 18, it is noted that these claims disclose substantially similar subject matter as claim 1 and that, thus, the rejections of these claims are believed to be overcome for substantially similar reasons as set forth above.

Regarding the rejections of claims 2, 3, 9, 10 and 17 it is noted that these claims depend from claims 1 and 8, respectively, and that, thus, threes claims are allowable for at least the reasons as set forth above. Regarding the rejection of claim 19, since claim 19 has been cancelled, this rejection is moot.

ALLOWABLE SUBJECT MATTER

Applicant acknowledges with appreciation that the Examiner has determined that claims 4-7 and 11-14 contain allowable subject matter. However, applicants respectfully assert that in view of the arguments presented hereinabove, these claims are allowable as originally presented.

NEWLY ADDED CLAIM

The applicant notes claim 20 has been added. Applicants further note that since claim 20 recites substantially similar subject matter as claims 1, 8 and 18, claim 20 is allowable for at

least the reasons discussed above.

CONCLUSION

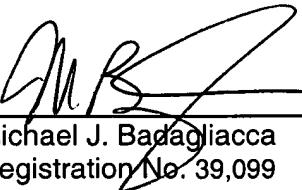
In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 12-21-04
By: 
Michael J. Badagliacca
Registration No. 39,099

1201 New York Avenue, N.W.
Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501